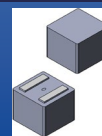


Flat Wire / Hot Pressed Molded Power Inductor



AMELH6060S

Request Samples



Check Inventory



6.8 x 6.6 x 5.8 mm
RoHS/RoHS II Compliant
MSL Level = 1

Features

- Excellent current capacity – up to 55A
- Exceptionally low DCR – down to only 0.8mΩ
- Soft saturation
- Compact size for high-density designs
- Shielded constructions for low EMI

Applications

- Body electronics
- Lighting
- Motor control
- Solar inverters and solar power
- DC/DC converters in distributed power systems
- Battery powered device

Electrical Specifications

| Part Number | Inductance | Tolerance | DC Resistance | | Saturation Current | | Temperature Rise Current | | Self-Resonant Frequency |
|------------------|-----------------|-----------|---------------|------|--------------------|------|--------------------------|------|-------------------------|
| | 0.1MHz/ 1.0V | | Typ | Max | Typ | Max | Typ | Max | Min |
| Units | μH | % | mΩ | | A | | A | | MHz |
| Symbol | L | M | DCR | | Isat | | Irms | | SRF |
| AMELH6060S-R18MT | 0.18 | 20 | 0.8 | 0.9 | 55.0 | 50.0 | 43.0 | 38.0 | 154 |
| AMELH6060S-R20MT | 0.20 | 20 | 0.9 | 1.1 | 50.0 | 45.0 | 40.0 | 36.0 | 135 |
| AMELH6060S-R22MT | 0.22 | 20 | 1.1 | 1.3 | 47.0 | 43.0 | 37.0 | 34.0 | 120 |
| AMELH6060S-R47MT | 0.47 | 20 | 1.5 | 1.8 | 35.0 | 32.0 | 33.0 | 30.0 | 72 |
| AMELH6060S-R68MT | 0.68 | 20 | 1.9 | 2.3 | 30.0 | 27.0 | 28.0 | 25.0 | 55 |
| AMELH6060S-1R0MT | 1.0 | 20 | 2.5 | 2.9 | 26.0 | 23.0 | 24.0 | 22.0 | 45 |
| AMELH6060S-1R2MT | 1.2 | 20 | 2.9 | 3.4 | 24.0 | 22.0 | 23.0 | 21.0 | 36 |
| AMELH6060S-1R5MT | 1.5 | 20 | 3.3 | 3.8 | 22.0 | 20.0 | 21.0 | 19.0 | 35 |
| AMELH6060S-2R2MT | 2.2 | 20 | 4.3 | 4.8 | 18.0 | 16.0 | 18.0 | 16.0 | 28 |
| AMELH6060S-3R3MT | 3.3 | 20 | 6.3 | 7.2 | 16.0 | 14.0 | 16.0 | 14.0 | 22 |
| AMELH6060S-4R7MT | 4.7 | 20 | 9.1 | 10.1 | 12.5 | 11.5 | 13.5 | 12.5 | 17 |
| AMELH6060S-5R6MT | 5.6 | 20 | 10.6 | 11.7 | 11.6 | 10.6 | 12.6 | 11.6 | 16 |
| AMELH6060S-6R8MT | 6.8 | 20 | 12.7 | 14.0 | 10.5 | 9.5 | 11.5 | 10.5 | 14 |
| AMELH6060S-8R2MT | 8.2 | 20 | 15.2 | 16.8 | 9.0 | 8.2 | 10.5 | 9.5 | 12 |
| AMELH6060S-100MT | 10.0 | 20 | 17.5 | 19.6 | 8.2 | 7.5 | 9.5 | 8.5 | 10 |
| AMELH6060S-120MT | 12.0 | 20 | 22.0 | 24.2 | 7.5 | 7.0 | 8.5 | 7.8 | 9 |
| AMELH6060S-150MT | 15.0 | 20 | 27.5 | 30.8 | 7.0 | 6.5 | 7.5 | 7.0 | 8 |
| AMELH6060S-180MT | 18.0 | 20 | 34.5 | 38.0 | 6.3 | 5.8 | 6.5 | 6.0 | 8 |
| AMELH6060S-220MT | 22.0 | 20 | 42.0 | 46.2 | 5.5 | 5.0 | 6.0 | 5.5 | 8 |

Test Conditions:

Isat: DC current at which the inductance drops 30% from its nominal value.

Irms: DC current that causes the temperature rise (ΔT , approximate 40 °C) from 25°C ambient.

Operating Voltage: 40V

Operating Temperature: -40°C ~ +125°C. (including self-temperature rise)

Storage Condition: -40°C ~ +125°C (on board), -10°C ~ +40°C (with packaging) and R.H. 85% max.

AMELH6060S Series is RoHS Compliant and Pb free.

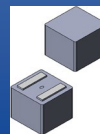


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AMELH6060S

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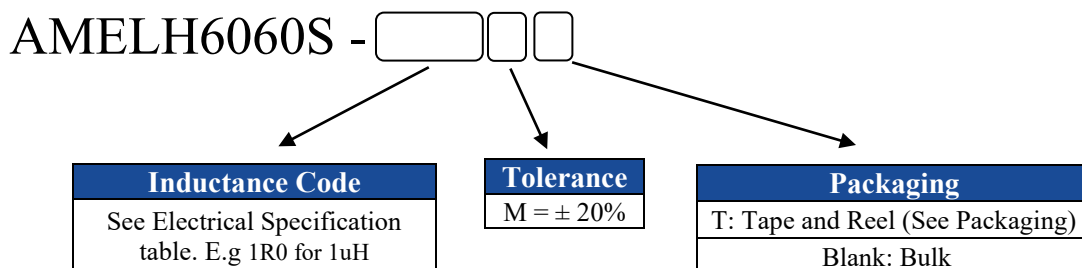


Check Inventory

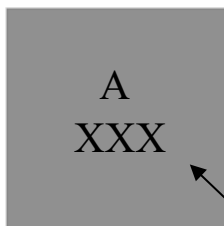


6.8 x 6.6 x 5.8 mm
RoHS/RoHS II Compliant
MSL Level = 1

Part Identification



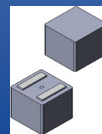
Marking



Inductance Code
e.g. 2R2

Marking Method = Ink Marking

Flat Wire / Hot Pressed Molded Power Inductor



AMELH6060S

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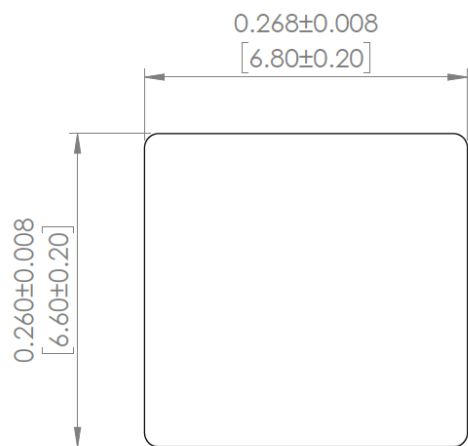


Check Inventory



6.8 x 6.6 x 5.8 mm
RoHS/RoHS II Compliant
MSL Level = 1

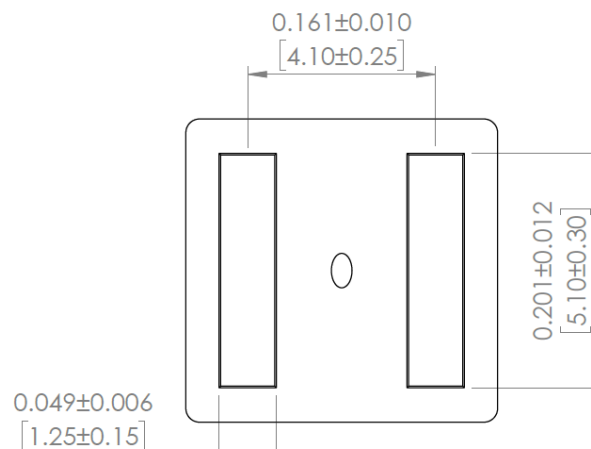
Mechanical Specifications



TOP VIEW

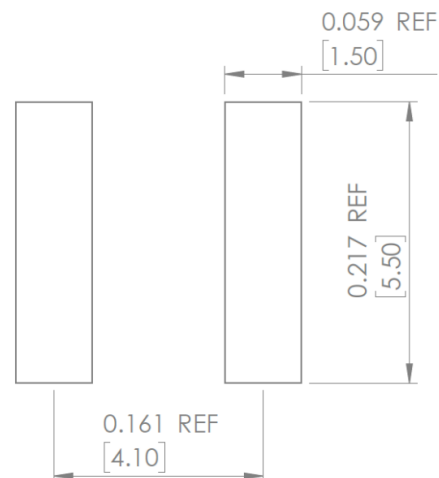


FRONT VIEW



BOTTOM VIEW

RECOMMENDED LAND PATTERN



NOTES:

The above PCB layout reference only.
Recommending solder paste thickness at .005[0.15] and above.
Inductance code markings, black.

DIMENSIONS: INCHES[mm]

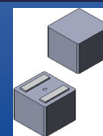


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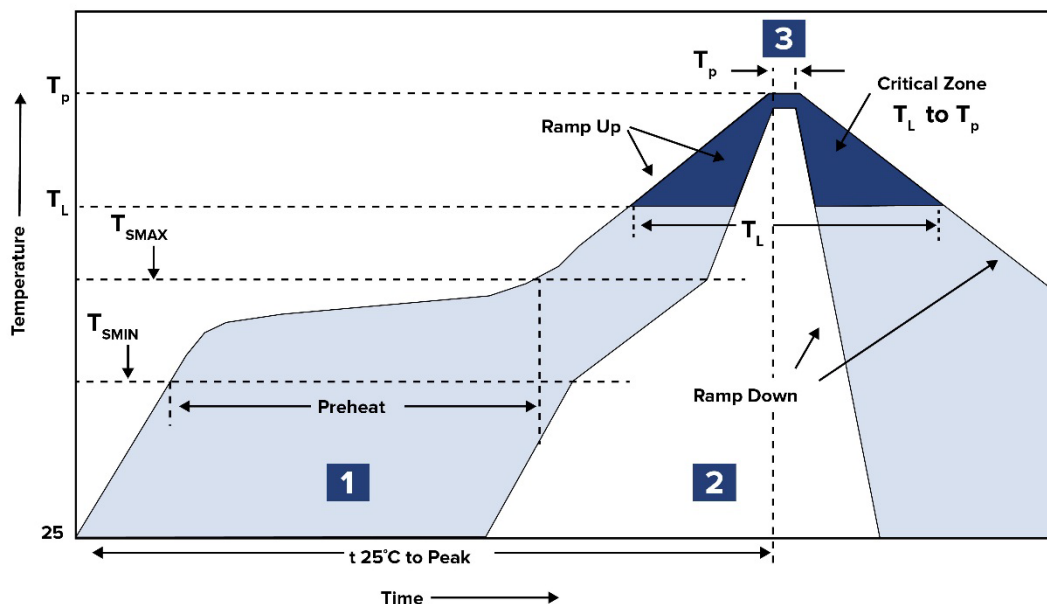


Check Inventory



6.8 x 6.6 x 5.8 mm
RoHS/RoHS II Compliant
MSL Level = 1

Reflow Profile



| Zone | Description | Temperature | Times |
|------|-------------|---|---------------|
| 1 | Preheat | $T_{SMIN} \sim T_{SMAX}$ 150°C ~ 200°C | 60 ~ 120 sec. |
| 2 | Reflow | T_L 217°C | 60 ~ 150 sec. |
| 3 | Peak heat | T_p 250°C±5°C | 10 sec. MAX |

Ref. Solder paste: Sn/3.0Ag/0.5Cu (Pb-free assembly)

Ramp up rate: 3°C/s Max.

Ramp down rate: 6°C/s Max.

Time from 25C to T_p : 8mins Max

Refer to standard IPC/JEDEC J-STD-020E for more information

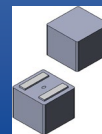


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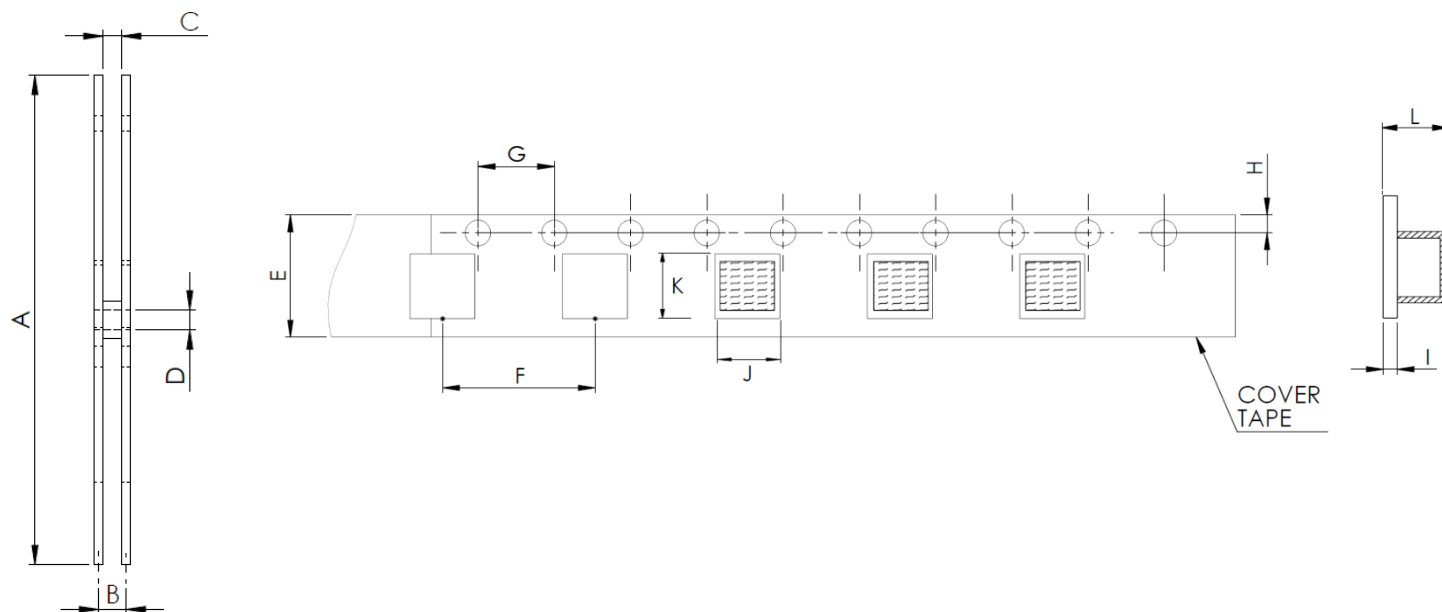
Check Inventory



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RoHS/RoHS II Compliant
MSL Level = 1

Packaging

T: Tape & Reel, 750 pcs/reel



| A | B | D | E | F | G | H | I | J | K | L |
|-------|--------|----------|----------|----------|---------|----------|----------|-----------|-----------|-----------|
| 330.0 | 16.4±2 | 13.0±0.5 | 16.0±0.3 | 12.0±0.1 | 4.0±0.1 | 1.75±0.1 | 0.35±0.1 | 7.00 Ref. | 6.80 Ref. | 6.30 Ref. |

Dimensions: mm

ATTENTION: Abracon LLC's products are Commercial-Off-The-Shelf (COTS, which are designed, intended and validated for use in commercial, industrial and automotive applications. The customer is responsible for testing and verifying the performance of an Abracon solution to meet their system-level requirements.



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| | | | | |
|---|---|---|---|---|
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| <u>AMELH6060S-150MT</u> | <u>AMELH6060S-1R2MT</u> | <u>AMELH6060S-100MT</u> | <u>AMELH6060S-R18MT</u> | <u>AMELH6060S-5R6MT</u> |
| <u>AMELH6060S-1R0MT</u> | <u>AMELH6060S-R20MT</u> | <u>AMELH6060S-R47MT</u> | <u>AMELH6060S-R68MT</u> | <u>AMELH6060S-220MT</u> |
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